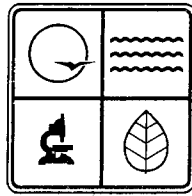


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **012006-010** Project Number: **2005-11-048**

Owner: **W. W. Wood Products, Incorporated**

Owner's Address: **P.O. Box 50, Dudley, MO 63936**

Installation Name: **W. W. Wood Products, Incorporated**

Installation Address: **12140 Main Street, P.O. Box 50, Dudley, MO 63936**

Location Information: **Stoddard County, S21, T25, R9**

Application for Authority to Construct was made for:

Construction of two (2) automatic flat-line, sealcoat/topcoat and finish drying systems, one (1) regenerative thermal oxidation control device, and nine (9) spray booths and permission for continued operation of the Air Curtain Destructor. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☒ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

JAN 18 2006

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

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| Permit No. | |
| Project No. | 2005-11-048 |

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

W. W. Wood Products, Incorporated
Stoddard County, S21, T25, R9

1. **Superseding Condition**

The conditions of this permit supersede all special conditions found in the previously issued construction permit (Permit Number 062005-007) from the Air Pollution Control Program.

2. **VOC Emission Limitation**

- A. W. W. Wood Products, Incorporated shall emit less than 250 tons of Volatile Organic Compounds (VOCs) from the equipment listed in Table 2 in any consecutive 12-month period.
- B. Attachment A or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2(A). W. W. Wood Products, Incorporated shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used in the equipment listed in Table 2.
- C. W. W. Wood Products, Incorporated shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2(B) indicate that the source exceeds the limitation of Special Conditions Number 2(A).

3. **Control Requirements – Regenerative Thermal Oxidizer (RTO)**

- A. The propane gas-fired RTO at the installation must be in use at all times when any of the four (4) automatic flat-line, sealcoat/topcoat and finish drying systems (EP-42, EP-43, and EP-44) are in operation. The thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications to ensure a minimum volatile organic compound (VOC) destruction efficiency of 99 percent (wt. %). This destruction/removal efficiency shall be verified through compliance testing, as detailed in Special Condition Number 4 of this permit.

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| Permit No. | |
| Project No. | 2005-11-048 |

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- B. The operating temperature of the RTO shall be continuously monitored and shall equal or exceed the temperature that is determined during the compliance test specified in Special Condition Number 4. The most recent sixty (60) months of records shall be maintained on-site and shall be made immediately available to Missouri Department of Natural Resources' personnel upon request.
- C. W. W. Wood Products, Incorporated shall maintain an operating, maintenance and inspection log for the RTO which shall include the following:
 - (1) Incidents of malfunction(s) including the date(s) and duration of the event, the probable cause, any corrective actions taken and the impact on missions due to the malfunction;
 - (2) Any maintenance activities conducted on the unit, such as replacement of equipment, etc.; and
 - (3) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.

4. Compliance Testing – Regenerative Thermal Oxidizer

- A. Within sixty (60) days of achieving normal production, but in no case later than 180 days after initial startup, an emission test shall be conducted to determine the destruction/removal efficiency of VOC emissions of the RTO. These tests shall be conducted in accordance with the Stack Test Procedures outlined in Special Conditions Numbers 4(B) through 4(D).
- B. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program thirty (30) days prior to the proposed test date so that this program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan must be approved by the Director of the Missouri Air Pollution Control Program prior to conducting the required emission testing.
- C. Two (2) copies of a written report of the performance test results shall be submitted to the Director of the Air Pollution Control Program within sixty (60) days of completion of any required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required EPA Method for

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| Permit No. | |
| Project No. | 2005-11-048 |

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

at least one (1) sample run.

- D. Performance testing shall be conducted under the condition of maximum process/production rate for at least one (1) of the four (4) automatic flat-line, sealcoat/topcoat and finish drying systems (EP-42), or within ten percent (10%) of this rated capacity. The process/production rate at which performance testing is conducted shall become the maximum process/production rate at which any of the four systems is permitted to operate, under the authority granted by this permit.

5. Control Device

High efficiency filters in all paint booths (EP-39, EP-40, EP-41, and EP-45 through EP-53) and the dry filter/screens in the automatic flat-line, sealcoat/topcoat and finish drying systems (EP-42- EP-43, and EP-44) must be in use at all times when the spray guns associated with the specific pieces of equipment are in operation and shall be operated and maintained in accordance with the manufacturer's specifications.

6. Air Curtain Destructor (ACD)

- A. The ACD must operate in conformance with manufacturer recommendations and the Operating and Maintenance manual. A copy of the Operating and Maintenance manual has been provided to the Regional Office and the Air Pollution Control Program and a copy must be kept on site at all times and made available to department personnel upon request;
- B. The ACD at this location can not burn more than 24,000 pounds per day of untreated wood waste;
- C. The company may only burn wood waste with no inks, coating, impregnation, pressure treatment or other treatment;
- D. No burning shall take place within 200 yards of any occupied structure or business except structures owned by W. W. Wood Products, Incorporated;
- E. All burning shall take place between 7:30 a.m. to 4:00 p.m. Monday through Friday;
- F. W. W. Wood Products, Incorporated must keep appropriate fire fighting equipment on hand at all times;
- G. A representative of the facility must be present during all burning to ensure

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| Permit No. | |
| Project No. | 2005-11-048 |

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

compliance with the terms and conditions of this Special Condition;

- H. Only one startup is allowed during each 24-hour period;
- I. In the event the facility and / or the Missouri Department of Natural Resources receive any complaint, all burning shall be suspended until the complaint has been resolved; and
- J. W. W. Wood Products, Incorporated shall maintain an operating, maintenance and inspection log for the ACD which shall include the following:
 - (1) The date, start and end time for each burning operation including the total weight in pounds of all materials burned during each day of operation;
 - (2) A narrative summary of any complaints received by the facility;
 - (3) Incidents of malfunction(s) including the date(s) and duration of the event, the probable cause, any corrective actions taken and the impact on missions due to the malfunction; and
 - (4) Any maintenance activities conducted on the unit, such as replacement of equipment, etc.;

7. Solvent/Ink Cloths

W. W. Wood Products, Incorporated shall keep solvents and cleaning solutions in sealed containers whenever the materials are not in use. W. W. Wood Products, Incorporated shall provide and maintain suitable, easily read, permanent markings on all solvent and cleaning solution containers used with this equipment.

Installation ID Number: 207-0019

Permit Number:

W. W. Wood Products, Incorporated
12140 Main Street, P.O. Box 50,
Dudley, MO 63936

Complete: November 17, 2005

Reviewed: December 23, 2005

Parent Company:
W. W. Wood Products, Incorporated
P.O. Box 50
Dudley, MO 63936

Stoddard County, S21, T25, R9

REVIEW SUMMARY

- W. W. Wood Products, Incorporated has applied for authority to construct two (2) automatic flat-line, sealcoat/topcoat and finish drying systems (also referred to as Cefla units), one (1) RTO control device, and nine (9) spray booths. In addition, they are seeking permission to continue operation of their ACD.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are xylene, methanol, ethyl benzene, formaldehyde, methyl isobutyl ketone (MIK), toluene, naphthalene, 2-butoxy-ethanol (a glycol ether), cumene, manganese compounds and chromium (III) compounds.
- New Source Performance Regulations, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or For Which Modification or Reconstruction is Commenced On or After June 1, 2001*, 40 CFR Part 60, Subpart CCCC applies to the ACD.
- The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart JJ, *National Emission Standards for Wood Furniture Manufacturing Operations* applies to the proposed equipment.
- Dry filter/screens are being used to control the particulate matter less than 10 microns in diameter (PM₁₀) emissions from the two (2) Cefla units (EP-42). High efficiency filters are being used to control PM₁₀ emissions from the nine (9) new spray booths (EP-45 through EP-53). A RTO is being used to control VOC emission from all four (4) Cefla units (EP-42, EP-43, and EP-44).
- The potential emissions of VOCs from the equipment listed in Table 2 are conditioned to below 250 tons per year. Therefore, this review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.
- This installation is located in Stoddard County, an attainment area for all criteria air pollutants.

- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- PM₁₀ emissions are above de minimis levels, therefore ambient air quality modeling was performed to determine the ambient impact of PM₁₀. Ambient air quality modeling was not performed on VOCs since no model is currently available which can accurately predict ambient ozone concentrations caused by this installation's VOC emissions. In addition, ambient air quality modeling was not performed on HAPS since a MACT applies.
- Emissions/Compliance testing is required for the RTO.
- The submittal of an amended Part 70 Operating Permit application is required for this installation within one (1) year of the new equipment startup
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

W. W. Wood Products, Inc., located in Dudley, Missouri, is an existing installation that is a multi-divisional vertically integrated processor of lumber and wood products. Due to the close proximity in timing of the last five projects (2005-11-048, 2005-02-104, 2004-10-015, 2004-09-001, and 2004-07-070), they are being grouped together and permitted as one project. The existing installation at the time of the first project (2004-07-070) was considered a minor source and therefore is considered a minor source for this permit by the Air Pollution Control Program. Future projects within at least one (1) calendar year of issuance of this permit will be looked at closely for circumvention. Final determination for circumvention will be made on a case by case basis. The existing installation is also a Part 70 source of air emissions by the Air Pollution Control Program. The company was issued a Part 70 Operating Permit (Number OP2000-054) on May 9, 2000 and their renewal is currently pending. After this construction permit, the installation will be minor for criteria pollutants and major for HAPs.

The W.W. Wood Products, Inc. divisions include a sawmill operation, a cabinet door operation, and operations for the production of both "Shiloh Custom Cabinetry" and "Sequoia Custom Cabinetry". In addition, the installation has a transportation division, which picks up raw material and delivers finished cabinetry to dealers. A maintenance division is also located at the installation to service material handling and transportation equipment.

The following permit projects have been processed by the Air Pollution Control Program for W. W. Wood Products, Inc.

Table 1: Permit Projects

| Permit Number | Description |
|---------------|-------------|
|---------------|-------------|

| Permit Number | Description |
|---------------|---|
| 062005-007 | 2005-02-104: Section (6) Permit. Addition of an automatic flat-line, sealcoat/topcoat application and finish drying system in the Shiloh Custom Cabinetry Division |
| 012005-006 | 2004-10-015: Section (5) Permit. Addition of two spray booths in the Shiloh Custom Cabinetry Division. |
| 112004-007 | 2004-09-001: Section (5) Permit. Addition of one spray booth to Sequoia Division. |
| 092004-015 | 2004-07-070: A Section (6) permit issued for the addition of an automatic flat-line, sealcoat/topcoat application and finish drying system in the Shiloh Custom Cabinetry Division. |
| | 2004-04-074: No Permit Required. added capacity |
| | 2002-04-096: Applicability determination, permit required. Replacement of spray booths. |
| | 2001-10-045: No Permit Required. Dust collection systems. |
| 102001-002 | 2001-07-021: A Section (5) permit issued for the addition of a new wood waste grinder. |
| | 2001-05-077: Applicability determination, permit required for new wood waste boiler. |
| 102001-008 | 2001-05-009: A Section (5) permit issued for the addition of 6 new spray booths and 2 new propane space heaters. |
| | 2001-05-010: No Permit Required. Saws and shapers |
| | 2001-04-064: Significant modification to Part 70 Operating Permit. |
| | 2001-01-026: No Permit Required. Cabinet making |
| | 2000-06-081: Scrap wood incinerator. Project closed out for lack of activity. |
| | 2000-05-114: No Permit Required. Expand facility |
| | 2000-04-060: No Permit Required. Ripsaws, planers, molders |
| 0499-009 | 1999-02-070: A Section (5) permit issued for 1 new De Vilbis lacquer spray booth. |
| OP2000-054 | 1998-01-068: Part 70 Operating Permit |
| 0898-015 | 1998-03-103: A Section (6) permit issued for the addition of 5 new paint booths. |
| | 1998-03-070: No Permit Required. Construction of a warehouse. |
| 0698-019 | 1998-02-0228: A Section (5) permit issued to convert the existing House Door Shop into the Savannah Cabinetry operation. |
| | 207-0019-008: No Permit Required. modification to EP-3 & EP-4 |
| | 4600-0019-007: Cyclone & blower replacement. |
| 1093-012 | 4600-0019-006: A Section (6) permit issued to move an existing Kitchen Cabinet shop to a new building. |
| 0792-004 | 4600-0019-005: A Section (5) issued to add a wood waste fired boiler and storage system. |

PROJECT DESCRIPTION

W. W. Wood Products, Inc. has applied for authority to construct two (2) new Cefla units, a RTO, and nine (9) new spray booths. Due to close proximity in timing of the last five projects, this project and the last four permits (Permit 062005-007, 012005-006, 112004-007, and 092004-015) are being grouped together and permitted as one project.

The two new Cefla units (EP-42) will be used to first apply the sealcoat/topcoat finish to the cabinet parts and then to dry the finish before sending the parts on to the cabinet assembly operation. The maximum hourly design rate (MHDR) for each Cefla unit is estimated at 31.88 gallons of finish material based on four (4) out of the eight (8) nozzles spraying at one time. Using the biggest tip size, the maximum spray per nozzle is 17 fluid ounces per minute. Each Cefla unit contains a 0.57 Million British Thermal Unit per hour propane combustion unit for drying the finish on the cabinet parts. A RTO is used to control VOC and HAP emissions from the two (2) new Cefla units as well as the two (2) previously permitted Cefla units. Dry filter/screens are used in the Cefla units to control PM₁₀ emissions.

In addition, nine (9) spray booths are also being added to various divisions within the facility. Each spray gun has a MHDR of 3.75 gallons of coating. In addition, up to 42 gallons per year of solvent for flushing lines and soaking tips and between 4 and 8 gallons per year of strippable spray booth coating is used in each spray booth. Amounts depend on maximum historical usage rates for similar existing spray booths. In the permits for the existing spray booths listed in Table 2, there was no mention of control devices for the paint booths. However, all spray booths both existing and proposed contain high-efficiency filters to control PM₁₀ emissions.

The existing installation prior to the first of the last five projects is considered a minor source for criteria pollutants and is not considered to be a named source. Therefore, the major source level for the criteria air pollutants is 250 tons per year as specified by Missouri Rule 10 CSR 10-6.060(8)(A)(2). As the applicant requested to voluntarily limit the last five projects to less than 250 tons per year of VOCs, this review was conducted under Section (6) of Missouri Rule 10 CSR 10-6.060, *Construction Permits Required*.

This installation is considered major for HAPs. However, the MACT, Subpart JJ will apply to the equipment associated with this project. Therefore, this project is not subject to the requirements of Missouri Rule 10 CSR 10-6.060, Section (9), *Hazardous Air Pollutant Permits* even though the potential to emit for several individual HAPs and the combined HAPs exceed the major source levels of 10.0/25.0 tons per year, respectively.

The MACT, Subpart JJ contains emission limitations on the finishing operations and strippable booth coating for existing major sources. W. W. Wood Products, Inc. must show compliance with these limitations as well as the other requirements included in the MACT.

Table 2: Project Emission Points

| Emission Points | Description of Unit | Comments |
|--|--|---|
| <i>Equipment from Previous Permits</i> | | |
| EP-39 | Glaze Spray Booth | Originally permitted in Permit No. 112004-007. |
| EP-40 | Wood Stain Booth | Originally permitted in Permit No. 0122005-006. Located in the Shiloh Custom Cabinetry Division. |
| EP-41 | Stain Sealer Booth | Originally permitted in Permit No. 0122005-006. Located in the Shiloh Custom Cabinetry Division. |
| EP-43* | Cefla Finish Application & Drying System | Originally permitted in Permit No. 092004-015. Currently uncontrolled, but will be exhausted into new RTO unit. (EP-42). Located in the Shiloh Custom Cabinetry Division. |
| EP-44* | Cefla Finish Application & Drying System | Originally permitted in Permit No. 062005-007. Currently uncontrolled, but will be exhausted into new RTO unit (EP-42). Located in the Shiloh Custom Cabinetry Division. |
| <i>Proposed Equipment</i> | | |
| EP-42* | Two new (2) Cefla Units with RTO | The new RTO will control VOC emissions from the two new Cefla units as well as those from the 2 existing Cefla units (EP-43 & EP44) |
| EP-45 | Wood Stain Booth | Located in the Shiloh Custom Cabinetry Division. |
| EP-46 | Sealcoat & Glaze Booth | Located in the Shiloh Custom Cabinetry Division. |
| EP-47 | Sealcoat & Glaze Booth | Located in the Shiloh Custom Cabinetry Division. |
| EP-48 | Topcoat & Glaze Booth | Located in the Shiloh Custom Cabinetry Division. |
| EP-49 | Wood Stain, Topcoat & Glaze Booth | Located in the Shiloh Custom Cabinetry Division. |
| EP-50 | Wood Stain & Sealcoat Booth | Located in the Sequoia Custom Cabinetry Division. |
| EP-51 | Wood Stain & Topcoat Booth | Located in the Sequoia Custom Cabinetry Division. |
| EP-52 | Pre-Catalyzed Lacquer & Sealcoat Booth | Located at the New Dove-Tail Drawers & Specialty Products Shop. |
| EP-53 | Pre-Catalyzed Lacquer & Topcoat Booth | Located at the New Dove-Tail Drawers & Specialty Products Shop. |

*EP-43 & EP-44 (Cefla units) are currently uncontrolled. Two new Cefla units are being added with this project and are included under EP-42. After startup of the RTO, all four Cefla units (the two new Cefla units from EP-42 and EP-43 & EP-44) will be controlled and classified as EP-42. Once the RTO has started up, emission point numbers EP-43 & EP-44 will not be used again for naming purposes.

W. W. Wood Products, Incorporated is also seeking permission for continued operation of the

ACD. This permit grants permission as long as operated in accordance with Special Condition 6. The ACD must be included in the revised Operating Permit; however, annual ACD permit renewal is no longer necessary.

EMISSIONS/CONTROLS EVALUATION

The main air pollutants of concern for the equipment listed in Table 2 are VOCs and HAPs. VOC and HAP emissions determined in this analysis were estimated using information obtained from the Material Safety Data Sheets for the new equipment. A mass balance approach was used to conservatively estimate that 100% of the VOC and HAP content of the coatings would be emitted into the atmosphere. A RTO is being used to control the emission of VOC and HAPs from the two (2) new Cefla units as well as the two (2) existing Cefla units. The RTO is expected to have a 99% destruction efficiency.

The new Cefla units will use a dry filter/screen to reduce the amount of PM₁₀ emissions resulting from the overspray of the coating. A 39.71% solid content, a 95% control efficiency and a 50% transfer efficiency was used to determine the PM₁₀ emissions from the overspray.

Similarly, PM₁₀ emissions for the spray booths were evaluated based on the solids content of the coating and a transfer efficiency from the spray gun (50%). If not specifically stated, the solids content of the material was conservatively estimated by taking the density of the paint and subtracting the VOC content and assuming the remainder to be all PM₁₀. PM₁₀ emissions are controlled through the use of fabric filters that have a minimum control efficiency of ninety nine percent (99.0%).

The emission factors for the combustion of propane in the dryers associated with the Cefla units and the combustion of propane in the RTO were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.5, *Liquefied Petroleum Gas Combustion* (10/96).

The potential emissions of this application were based on the maximum hourly design rate for the new Cefla units and spray booths, the appropriate emission factors and mass balance calculations, and the effects of any controls, assuming continuous year-round operation (8760 hours per year). The existing potential emissions were obtained from information contained in Permit Number 102001-002. The potential emissions for EP-39 were obtained from the Emission Summary Table in Permit 112004-007. The potential emissions for EP-40 and EP-41 were obtained from the Emission Summary Table in Permit 012005-006. Potential PM₁₀ emissions were not calculated for the following spray booths (EP-39, EP-40, and EP41) in their original respective permits. PM₁₀ potential emissions are estimated to be 1.25 tons per year for these spray booths and are included in the potential emissions of this project.

The potential emissions for EP-43 were miscalculated in the original permit (Permit 092004-015). Since EP-43 is identical to EP-44, the potential emissions of EP-43 were obtained from EP-44 calculations. In addition, the potential emissions of the dryer from permit 062005-007 were miscalculated. The corrected emissions from the dryer are much lower than originally determined. All values listed in the following table reflect the corrected amounts.

Table 3: Emissions Summary (tons per year)

| Pollutant | Regulatory <i>De Minimis</i> Levels | Existing Potential Emissions | Existing Actual Emissions (2004 EIQ) | Potential Emissions of the Application ¹ | Application Conditioned Potential |
|--|---|------------------------------------|---|--|---|
| PM ₁₀ | 15.0 | 32.80 | 17.62 | 48.58 | N/A |
| SO _x | 40.0 | 0.11 | 0.06 | 0.41 | N/A |
| NO _x | 40.0 | 9.38 | 3.09 | 5.42 | N/A |
| VOC | 40.0 | 171.50 | 195.73 | 1124.59 | <250 |
| CO | 100.0 | 19.30 | 1.49 | 0.72 | N/A |
| Hazardous Air Pollutants (HAPs) | | | | | |
| Total HAPs | 25.0 | 29.20 | N/D | 400.26 | N/A ² |
| Ethyl Benzene | 10.0 | N/D | N/D | 33.42 | N/A ² |
| Formaldehyde | 10.0 | N/D | N/D | 1.50 | N/A ² |
| Methanol | 10.0 | N/D | N/D | 113.64 | N/A ² |
| Xylenes | 10.0 | N/D | N/D | 184.73 | N/A ² |
| MIK | 10.0 | N/D | N/D | 0.06 | N/A ² |
| Toluene | 10.0 | N/D | N/D | 174.84 | N/A ² |
| Naphthalene | 10.0 | N/D | N/D | 4.20 | N/A ² |
| 2-Butoxy-1-Ethanol | 10.0 | N/D | N/D | 18.78 | N/A ² |
| Cumene | 10.0 | N/D | N/D | 0.80 | N/A ² |
| Manganese Dioxide | 10.0 | N/D | N/D | 0.01 | N/A ² |
| Manganese Trioxide | 10.0 | N/D | N/D | 0.01 | N/A ² |
| Chromium (III) | 10.0 | N/D | N/D | 0.02 | N/A ² |

N/A = Not Applicable; N/D = Not Determined

Note 1: The potential emissions of this application are a summation of potential emissions from project 2005-11-078 and Permits 062005-007, 012005-006, 112004-007, and 092004-015. A change was made to potential emissions of Permit 092004-015 to correct the miscalculation of the MHDR and of Permit 062005-007 to correct the potential emissions of the dryer.

Note 2: HAPs are indirectly limited by the VOC limit and are also subject to MACT, Subpart JJ.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOCs are conditioned to below 250 tons per year.

APPLICABLE REQUIREMENTS

W. W. Wood Products, Incorporated shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or For Which Modification or Reconstruction is Commenced On or After June 1, 2001*, 40 CFR Part 60, Subpart CCCC
- *Maximum Achievable Control Technology (MACT) Regulations*, 10 CSR 10-6.075, *National Emission Standards for Wood Furniture Manufacturing Operation*, 40 CFR Part 63, Subpart JJ
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

AMBIENT AIR QUALITY IMPACT ANALYSIS

A Screen 3 modeling analysis was performed to determine if the National Ambient Air Quality Standard (NAAQS) for PM₁₀ would be exceeded at or beyond the property line of the W. W. Wood Product's facility. The PM₁₀ emission rate for the project is 11.12 lb/hr. The stack parameters as provided by the applicant are listed in Table 4.

Table 4: Stack Parameters

| Stack No. | Height (ft) | Diameter (ft) | Temperature (F) | Flow Rate (Standard cubic feet/min) |
|-----------|-------------|---------------|-----------------|-------------------------------------|
| EP-01 | 30.0 | 3.0 | 200 | 28,252 |

The following table lists the air quality impact for PM₁₀.

Table 5: Ambient Air Quality Impact Analysis

| Pollutant | Modeled Impact ($\mu\text{g}/\text{m}^3$) | NAAQS ($\mu\text{g}/\text{m}^3$) | Time Period |
|------------------|--|---------------------------------------|-------------|
| PM ₁₀ | 17.1 | 150.0 | 24-hour |
| | 3.4 | 50.0 | Annual |

As indicated in the above table, PM₁₀ emissions from the equipment added under this permit are expected to be in compliance with the NAAQS.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Susan Heckenkamp
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 11, 2005, received November 17, 2005, designating W. W. Wood Product, Incorporated as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Southeast Regional Office Site Survey, dated November 30, 2005.
- MSDS

W. W. Wood Products, Inc.
Stoddard County County, 1/4: SW, 1/4: SW, S21, T25, R9
Project Number: 2005-11-048
Installation ID Number: 207-0019
Permit Number:

Copy this sheet as needed.

INSTRUCTIONS: Choose appropriate VOC calculation method for units reported:

- (a) 1) If usage is in tons - [Column 2] x [Column 4] = [Column 6];
- 2) If usage is in pounds - [Column 2] x [Column 4] x [0.0005] = [Column 6];
- 3) If usage is in gallons - [Column 2] x [Column 3] x [Column 4] x [0.0005] = [Column 6].
- (b) Summation of [Column 6] in Tons;
- (c) 12-Month VOC emissions total (e) from last month's Attachment A, in Tons;
- (d) Monthly VOC emissions total (b) from previous year's Attachment A, in Tons;
- (e) Calculate the new 12-month VOC emissions total. **A 12-Month VOC emissions total (e) of less than 250.0 tons for the four (4) Cefla units (EP- 42), and the twelve (12) spray booths (EP-39, EP-40, EP-41, EP45 through EP53) indicates compliance.**